

ABSTRACT

The present invention relates to a method for the preparation of a layer of a plasma-polymerised material on the surface of a substrate, e.g. a substrate of a glass, an organosiloxane-based or polysiloxane-based material, silicon, fluoro-polymer (e.g. Teflon®), etc. The present invention also relates to novel objects and microstructured or micro-patterned devices, e.g. by lift-off techniques, in particular such objects and devices that have layers of electrically conducting materials providing a conductivity of at least 0.01 S/cm. A feature of the invention is the plasma-polymerization of a compound including at least one polycyclic compound, said polycyclic compound(s) comprising a non-aromatic heterocyclic ring fused to an aromatic or heteroaromatic ring or ring system. Examples of such compounds are 3,4-ethylenedioxythiophene (EDT) forming layers of poly(ethylenedioxythiophene) (PEDT), and piperonylamine, piperonyloyl chloride, safrole, 3,4-ethylenedioxy pyrrole, 3,4-ethylenedioxy-N-methylpyrrole, and 3,4-methylenedioxythiophene.